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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/312,823	05/17/99	TAGUCHI	T

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EXAMINER

PEYTON, T

ART UNIT

PAPER NUMBER

2782

DATE MAILED:

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/312,823

Applicant(s)
TAGUCHI

Examiner
Tammara Peyton

Group Art Unit
2782



☒ Responsive to communication(s) filed on May 17, 1999.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 9-149 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 9-149 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☒ received in Application No. (Series Code/Serial Number) 08/307,494.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

1. Claims 9-149 from application number 09/312,823 are pending for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 9-149 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Heath et al.*, (*hereafter Heath*), patent no. 5,038,320 and *Haff*, patent no. 5,083, 262.

4. As per claims 9 and 28, *Heath* teaches of an information processing apparatus comprising:

a connector means [Board sockets or slots 2-0 to 2-7, Fig. 1] for connecting an external device [I/O option card, 5-1 to 5-7, Fig. 1, via an expansion port of disk drives, printers, add-on memory, etc.] to said apparatus [system board, 1, Fig. 1]; and

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a central processing unit [CPU, 8, Fig. 1], loading means, for executing a program for loading a ID signal for the external device [disk drives, printers, add-on memory, etc.]connected by said connector from the connected external device.[col.2, lines 20-26 and col. 3, lines 6-12, 54-59]

Heath discloses a system wherein the I/O option card, that incorporates an integrated driver ID, wherein the card is configured to transmit a signal to the apparatus which uniquely identifies the card type and what that card type is controlling i.e. its respective peripheral. *Heath* does not clearly teach of the integrated driver circuit, 20 downloading a device driver to the apparatus for the external device.

5. Nonetheless, *Haff* teaches of loading a device driver [program code] through an interface from a portable external device [col. 5, lines 25 - col. 6, lines 30] wherein the device driver is loaded into the system memory thereby enabling the information apparatus to control the external device.

6. It would have been obvious to one of ordinary skill to combine the limitations of *Heath* with *Haff* in order to produce a system wherein the device driver is downloaded from an external device as taught by *Haff* to be utilized in a system taught by *Heath* to control the external device, because this would eliminate the need to store device driver for external devices in the system's memory beforehand thereby saving system resources.

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7. As per claim 46, *Heath* teaches of a storage medium [Memory, 10] used in an information processing apparatus [Host Board, 1, Fig. 1, col. 2, lines 26-37] including a connector [Board sockets or slots 2-0 to 2-7, Fig. 1], said storage medium comprising storage means for storing a program for loading a ID signal for an external device [I/O option card, 5-1 to 5-7, Fig. 1, via an expansion port of disk drives, printers, add-on memory, etc.][col. 3, lines 54-63,66-67 and col. 4, lines 1-4] connected to the information processing apparatus by the connector [Board sockets or slots 2-0 to 2-7, Fig. 1] from the connected external device [disk drives, printers, add-on memory, etc.]. *Heath* does not clearly teach of the integrated driver circuit, 20 downloading a device driver to the apparatus for the external device.

Nonetheless, *Haff* teaches of loading a device driver [program code] through an interface from a portable external device [col. 5, lines 25 - col. 6, lines 30] wherein the device driver is loaded into the system memory thereby enabling the information apparatus to control the external device. [See paragraph 6]

8. As per claims 63 and 81, *Heath* teach of an information processing method carried out in an information processing apparatus [Host Board, 1, Fig. 1, col. 2, lines 26-37] having a connector [Board sockets or slots 2-0 to 2-7, Fig. 1] for connecting an external device [disk drives, printers, add-on memory, etc.] to the apparatus, said method comprising the steps of:

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discriminating ¹ the type of the external device [I/O option card, 5-1 to 5-7, Fig. 1, via an expansion port of disk drives, printers, add-on memory, etc.] connected to the apparatus [Host Board, 1, Fig. 1, col. 2, lines 26-37] by the connector [Board sockets or slots 2-0 to 2-7, Fig. 1]; and

loading, executing a program [via set-up routines in POST] for loading a ID signal for the external device [I/O option card, 5-1 to 5-7, Fig. 1, via an expansion port of disk drives, printers, add-on memory, etc.] connected by the connector [Board sockets or slots 2-0 to 2-7, Fig. 1] from the connected external device. However, *Heath* does not teach of downloading a device driver.

Nonetheless, *Haff* teaches of loading a device driver [program code] through an interface from a portable external device [col. 5, lines 25 - col. 6, lines 30] wherein the device driver is

¹ *Heath* teaches that the central operating system [CPU, 8] polls external devices connected to the connector and compares the returned signal with the values stored in the storage means. [memory module, 10] If the values for that particular external device is in the storage means then the external device is configured according to those value stored in the storage means. If there are no value for that particular external device then new values are created. Therefore it would have been obvious to one of ordinary skill that the system taught by *Heath* incorporate the means to discriminate the type of external device it is connected to in order to ensure that the external device is only configured once thereby saving the CPU from performing extra configuration routines. [col. 3, lines 19-27]

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loaded into the system memory thereby enabling the information apparatus to control the external device. [See paragraph 6]

9. As per claim 99, *Heath* teaches of an information processing apparatus comprising:
a connector means [Board sockets or slots 2-0 to 2-7, Fig. 1] for connecting an external device to said apparatus; and;

storage means [Memory, 10, Fig. 1] for storing a ID signal for the external device [I/O option card, 5-1 to 5-7, Fig. 1, via an expansion port of disk drives, printers, add-on memory, etc.]connected by said connecting means [Board sockets or slots 2-0 to 2-7, Fig. 1] and loaded from the connected external device. However, *Heath* does not teach of the external device downloading a device driver.

Nonetheless, *Haff* teaches of loading a device driver [program code] through an interface from a portable external device [col. 5, lines 25 - col. 6, lines 30] wherein the device driver is loaded into the system memory thereby enabling the information apparatus to control the external device. [See paragraph 6]

10. As per claim 114, *Heath* teaches of a storage medium [Memory Module, 10, Fig.1] for storing a program [ID program via set-up routines POST] used in an information processing apparatus having a connector [Board sockets or slots 2-0 to 2-7, Fig. 1] for connecting an

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external device [I/O option card, 5-1 to 5-7, Fig. 1, via an expansion port of disk drives, printers, add-on memory, etc.] to the apparatus, the program performing the steps of:

discriminating [see footnote 1] the type of the external device connected to the apparatus by the connector [Board sockets or slots 2-0 to 2-7, Fig. 1]; and

executing a program [set-up routines POST] for loading a ID signal for the external device connected by the connector [Board sockets or slots 2-0 to 2-7, Fig. 1] from the connected external device. However, *Heath* does not teach of downloading a device driver.

Nonetheless, *Haff* teaches of loading a device driver [program code] through an interface from a portable external device [col. 5, lines 25 - col. 6, lines 30] wherein the device driver is loaded into the system memory thereby enabling the information apparatus to control the external device. [See paragraph 6]

11. As per claim 132, *Heath* teaches of a storage medium [Memory Module, 10] for storing a program used in an information processing apparatus having a connector [Board sockets or slots 2-0 to 2-7, Fig. 1] for connecting an external device [disk drives, printers, add-on memory, etc.] to the apparatus, the program performing the steps of:

discriminating [see footnote 1] the type of the external device [I/O option card, 5-1 to 5-7, Fig. 1, via an expansion port of disk drives, printers, add-on memory, etc.] connected to the apparatus by the connector; and

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loading a ID signal for the external device connected by the connector [Board sockets or slots 2-0 to 2-7, Fig. 1] from the connected external device [I/O option card, 5-1 to 5-7, Fig. 1, via an expansion port of disk drives, printers, add-on memory, etc.]. However, *Heath* does not teach of downloading a device driver.

Nonetheless, *Haff* teaches of loading a device driver [program code] through an interface from a portable external device [col. 5, lines 25 - col. 6, lines 30] wherein the device driver is loaded into the system memory thereby enabling the information apparatus to control the external device. [See paragraph 6]

12. As per claims 10, 11, 29, 30, 47, 48, 64, 65, 82, 83, 100, 101, 115, 116, 133, and 134, *Heath* does not disclose the external device comprises either a random access memory (RAM) card and read only memory (ROM) card, however, *Haff* discloses of the external device comprising a RAM card. [col. 6, lines 19-25]. However, applicant discloses in the specification that conventional external devices [IC card, 50, Fig. 9] do incorporate ROM cards. One of ordinary skill would readily recognize that by adding a ROM cards to *Heath's* and *Haff's* external device would expand and add flexibility to the system.

13. As per claims 12, 31, 49, 66, 84, 102, 117, and 135, *Heath* nor *Haff* clearly disclose that the external device comprises an input/output card for inputting or outputting information between said information processing apparatus and another information processing apparatus.

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Nonetheless, *Heath* does disclose that the external device [I/O option card, 5-1 to 5-7, Fig. 1, via an expansion n port of disk drives, printers, add-on memory, etc.] has an integrated control and decode logic, 22 and 23 respectfully, that controls the actions of I/O option card when a command is received from the apparatus. [col. 3, lines 28-30]. Further, the I/O option card can transmits signal [via driver, 20] to the apparatus and the external device incorporates a register, 21 that stored information transmitted from the apparatus.[col. 3, lines 13-21] Therefore, it would have been obvious to one of ordinary skill that if the external device taught by *Heath* has the ability to transmit and receive data from the apparatus, than the external device disclose by *Heath* would incorporate the interface logic to carry out the function.

14. As per claims 13, 32, 50, 67, 85, 103, 118, and 136, *Heath* discloses that the external device comprises another information processing apparatus which is connected by said connector [Board sockets or slots 2-0 to 2-7, Fig. 1]. However, *Heath* does not teach that the connection is via an interface cable. Nonetheless, it would have been obvious to one of ordinary skill that the external device would incorporate some type of interface means in order to communication with the apparatus.

15. As per claims 14, 33, 51, 68, 86, 119, and 137, *Heath* teaches that the program executed by said central processing unit comprises an operating system via system Board, 1, Fig. 1, however, *Heath* does not teach of loading a device driver in accordance with an operating

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system. Nonetheless, *Haff* clearly teaches of the program to download the device driver is in accordance with an operating system. [See Abstract - *Haff*, paragraph 6]

16. As per claims 15, 34, 52, 69, 87, 104, 120, and 138, *Haff* teaches that the loaded device driver comprises the knowledge for controlling the external devices. [See Abstract - *Haff*]

17. As per claims 16, 33, 35, 70, 88, 121, and 139, *Haff* teaches of the central processing unit executing the device driver to control the external device. [See Fig. 3 and paragraph 5]

18. As per claims 17, 36, 53, 71, 89, 105, 122, and 140, *Heath and Haff both* teach of said central processing unit [*Heath*, CPU, 8, *Haff*, CPU] executing the program stored in the storage means [*Heath*, Memory Module, 10 and *Haff*, element 117B] when said apparatus is turned on. [*Heath*, col. 3, lines 13-18 and 44-63 *Heath* discloses during a power-up sequence the CPU executes the ID program., *Haff* , col. 2, lines 20 et seq.]

19. As per claims 18, 37, 54, 72, 90, 106, 123, and 141, *Heath and Haff both* teach of the central processing unit [*Heath*, CPU, 8, *Haff*, CPU] executing the program stored in the storage means [*Heath*, Memory Module, 10 and *Haff*, element 117B] when the external apparatus is connected by said connector. [*Heath*, col. 3, lines 44-63, *Haff* , Fig. 3]

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20. As per claims 19-22, 38- 41, 55-58, 73-76, 91-94, 107-110, 124-127 and 142-145, official notice is taken that the apparatus comprises a notebook personal computer, an electronic pocket book, an electronic camera, or facsimile apparatus, because the specific apparatus taught by *Heath* does not depend upon the specific device it is comprised of. Further, the apparatus claimed by applicant could be incorporated in *Heath's* system and not depart from its inventive concept.

21. As per claims 23, 42, 59, 77, 95, 111, 123, and 141, official notice is taken that the connector must have 68 signal pins, because the specific connector disclosed by *Heath* could consist of a different number of signal pins as long as it does not depart from the inventive concept.

22. As per claims 24, 25, 43, 60, 78, 96, 129, 147, *Haff* teaches of a loading means and a storage means that stores the device driver program. [See Abstract]

23. As per claims 26, 27, 44, 45, 61, 62, 79, 80, 97, 98, 112, 113, 130, 131, 148, and 149, *Heath* does not disclose the apparatus or storage medium comprising a display for displaying a character or a keyboard for inputting a character. However, *Haff* system teaches of user interfaces in order to communicate with the system. One of ordinary skill would readily recognize that by attaching the limitations of *Haff's* user interfaces with *Heath's* System [system board, 1, Fig. 1]

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would expand and add flexibility to the system because this would provide an efficient use of user related input and output.

Conclusion

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tammara Peyton whose telephone number is (703) 306-5508. The examiner can normally be reached between 8:00 - 4:30 from Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee, can be reached on (703) 305-9717. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3718.

25. Any inquiry of a general nature of relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Mailed responses to this action should be sent to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231.

Faxes for formal communications intended for entry should be sent to:

(703) 308-9051,

or, for informal or draft communications, to:

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(703) 306-5404 (please label "PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to:

Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Tammara Peyton

September 30, 1999



THOMAS C. LEE
SUPERVISORY PATENT EXAMINER
GROUP 2700